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THE INSTITUTE OF PHYSICS

47, BELGRAVE SQUARE, LONDON, S.W.1

BULLETIN

No. 6 JUNE 1950

DIARY OF INSTITUTE MEETINGS

Members may bring guests to any of the meetings listed below unless otherwise indicated. Individual notification has been sent to the members of the Branch or Group concerned. Other members of the Institute may obtain further particulars from the Secretary of the Institute.

June 17th (London and Home Counties Branch). Visit to the National Institute for Research in Dairying, Reading (tickets required).

June 27th and 28th (Midland Branch). At the University of Birmingham, Edgbaston.
Conference and Exhibition on **"Vacuum Equipment"** (tickets required).

June 29th, 30th and July 1st (Manchester and District Branch). At the University of Manchester.
Conference on **"The Physics of Lubrication."**
(Joint meeting with the British Rheologists Club.)

July 1st (Education Group). Visit to the Science Schools of Harrow School.

July 25th–28th (Industrial Radiology Group). At the New Horticultural Hall, Westminster, London.

Exhibition and Meetings in connection with the International Congress of Radiology (tickets required).

THIRTIETH ANNUAL GENERAL MEETING

NOTICE IS HEREBY GIVEN that the Thirtieth Annual General Meeting of The Institute of Physics will be held at 5 p.m. on Thursday, July 20, 1950, in the Institute's House, 47 Belgrave Square, London, S.W.1. Attendance is limited to Fellows and Associates of the Institute. The business to be conducted is the consideration of the Board's report, the accounts and balance sheets for 1949, the declaration of the election of the Honorary Officers and other members of the Board nominated, and the election of auditors. A copy of the annual report and accounts was printed in the April issue of the Bulletin. Further copies will be sent on request.

AND NOTICE IS HEREBY FURTHER GIVEN that the following Resolution will be submitted to the meeting as Special Business for consideration and if thought fit passing with or without modification, that is to say:—

RESOLUTION. That By-law 17 be deleted.

In support of this Resolution the Board wishes to make the following remarks:

By-law 17 is concerned with life composition fees and was amended by the General Meeting in 1948 to restrict this right to Members over fifty. In view of the recent increase in annual subscription rates, actuarial opinion was obtained on appropriate revised rates for those eligible to compound, taking into account the rule which allows remission of subscription for members over sixty-five and of twenty years standing.

The proposed figures differed little from the arithmetical sum of the subscriptions due in the fifteen years from age fifty. In view of the present low rates of interest and the need for the annual revenue to be as large as possible, the Board considers it wise to withdraw the right to compound for subscriptions. Accordingly it submits the proposal to delete By-law 17.

NOTICES TO MEMBERS

Recognition of Technical Colleges

The Board is still receiving requests from Technical Colleges for the granting of official recognition for the purposes of the Institute's membership regulations which require candidates to have had an education and training in physics at an institution recognized for this purpose. Recognition is not granted unless an inspecting panel is satisfied with the facilities and staffing of the College. The latest edition of the Institute's handbook lists twenty-nine Technical Colleges in Great Britain which have so far been recognized; since the publication of the handbook an additional College, South-East London Technical College, Lewisham, has been inspected and approved, and inspections of two other Colleges have already been arranged.

Members whose assistants may be following courses at Technical Colleges which will lead to one of the qualifications acceptable for membership of the Institute

are reminded that the election of these assistants to membership of the Institute will be dependent upon the recognition of the establishment at which they are studying.

Forthcoming Publications

The following new titles for the Physics in Industry series of monographs published by the Institute are announced:

Creep of Metals, by L. Rotherham (Fellow).

Methods for Determining Equilibrium Diagrams, by W. B. Pearson, H. W. Hume-Rothery (Fellow) and S. W. Christian.

Industrial Magnetic Testing, by Professor N. F. Astbury (Fellow).

Mass Spectrometry, by G. P. Barnard (Fellow).

Details of dates of publication and of prices will be announced shortly.

Notes for Authors

A new edition of "Notes on the Preparation of Contributions to the Institute's Journals and other Publications" is now available and Members who are preparing papers are asked to read the booklet before submitting them for publication. Copies may be obtained on application to the Secretary of the Institute. They are free to Members, but a charge of 2s. including postage, is made to non-members.

Contributions from Members

Members of the Institute are reminded that contributions to the Bulletin will be welcome. They may take the form of items of correspondence or short notes on any matters which are likely to interest other Members.

Back numbers of the "Journal of Scientific Instruments"

The appeal in the May issue of the Bulletin for back issues of the *Journal of Scientific Instruments* which were required to enable the Institute to meet orders has been very successful. Will Members please note that only the following parts can now be accepted for purchase: 7s. 6d. per part will be paid for any of those below which are in good condition:—

Year	Volume	Parts
1923–24	1	3, 5, 6, 10
1924–25	2	6, 8, 9, 11, 12
1925–26	3	4, 7, 10, 12
1926–27	4	3, 4
1935	12	3, 5
1936	13	11

Change of Branch and Group Officers

Scottish Branch. Professor J. S. Rankin has succeeded Professor P. I. Dee as Chairman of the Branch and Dr. C. A. Beevers has been elected Vice-Chairman.

Electron Microscopy Group. Professor W. T. Astbury has succeeded Dr. A. S. McFarlane as Chairman of the Group.

X-Ray Analysis Group. Dr. W. H. Taylor has succeeded Mr. D. A. Oliver as Chairman of the Group and Mr. H. P. Rooksby has been elected Vice-Chairman.

NEWS OF MEMBERS

Honorary Fellow

Sir Edward Appleton has been awarded the Honorary Degree of LL.D. by the University of Glasgow.

Fellows

L. V. Chilton has been elected President of the Royal Photographic Society.

Prof. G. P. Dube has been elected a Fellow of the Indian Academy of Sciences.

The following professional appointments have been notified:

B. N. Clack—Principal Scientific Officer, The Radiochemical Centre, Amersham, Bucks.

Prof. P. P. Ewald—Professor of Physics, Polytechnic Institute of Brooklyn, N.Y., U.S.A.

M. R. Gavin—Head of the Department of Physics and Mathematics, Birmingham Central Technical College.

A. G. Quarrell—Professor and head of the new post-graduate school of physical metallurgy in the University of Sheffield.

Associates

The following professional appointments have been notified:

H. Arthur—Deputy Education Officer, Borough of Tottenham.

C. E. Challice—Physicist, Bio-physics Department, National Institute for Medical Research, Mill Hill, London.

J. R. Greening—Physicist, St. George's Hospital, London, S.W.1.

T. L. Howson—Senior Education Officer, Air Training Centre, Korangi Creek, Nr. Karachi, Pakistan.

G. Sim—Senior Assistant in Physics, Derby Technical College.

R. Teale—Lecturer, Leeds College of Technology.

V. G. F. Tull—Scientific Officer, British Insulated Callenders' Cables, Ltd.

R. L. Whitmore—Lecturer in Coal Treatment in the Department of Mining at the University of Birmingham.

S. Wilks—Senior Lecturer, Sunderland Technical College.

R. L. Williams—Power Cables Research Manager, British Insulated Callenders' Cables Ltd.

Graduate

The following professional appointment has been notified:

W. Arrowsmith—Technical Superintendent (Electrical), St. Helens Cables and Rubber Co., Ltd., Slough.

Subscriber

W. J. Elford has been elected a Fellow of the Royal Society.

(*heard at an Institute conference*)

"As Rutherford said, all science is either physics or stamp-collecting."

THE REGISTER

ELECTIONS TO MEMBERSHIP

Fellows

An asterisk (*) indicates transfer from Associateship.

Atkinson, James Robert, B.A., Lecturer in Natural Philosophy, University of Glasgow.
*Bacon, George Edward, M.A., Principal Scientific Officer, Atomic Energy Research Establishment, Harwell.
Barrell, Henry, B.Sc., A.R.C.S., D.I.C., Senior Principal Scientific Officer, National Physical Laboratory, Teddington.
*Gillings, David William, B.Sc., Ph.D., Scientific Staff Officer, National Coal Board.
*Hargreaves, Arnold, B.Sc., Ph.D., Lecturer in Physics, College of Technology, Manchester.
*Milbourne, Maurice, B.Sc., A.R.C.S., D.I.C., Technical Officer, Imperial Chemical Industries Ltd. (Metals Division), Birmingham.
Morris, George, B.Sc., Ph.D., Physicist, Imperial Chemical Industries Ltd. (Nobel Division).
Richards, Trevor Lloyd, B.Sc., Ph.D., Technical Officer, Imperial Chemical Industries Ltd. (Metals Division), Birmingham.
*Tompa, Hans, Dip.Ing.(Vienna), Dr.Tech.(Vienna), Physicist, Courtaulds Ltd., Maidenhead.
Wynne, Charles Gorrie, B.A., Chief Optical Designer, Wray (Optical Works) Ltd., Bromley, Kent.

Associates

An asterisk (*) indicates transfer from Student.

Bell, Isaac Player, M.Sc., Research Physicist, Lever Bros. and Unilever Ltd., Port Sunlight.
Blunden, William Ross, B.Sc., Senior Research Officer, C.S.I.R.O., Australia.
Bridger, Kenneth William, Lecture Demonstrator, Royal Institution, London.
Cannon, Arthur Gilbert, B.Sc., Physicist, Imperial Smelting Corporation, Avonmouth, near Bristol.
Denton, Peter, B.Sc., Research Officer, British Cotton Industry Research Association, Manchester.
Dillon, Joseph Francis, M.A., Ph.D., Physicist, United States Department of Agriculture.
*Gifford, Derek, B.Sc., Research Student, University of Bristol.
Goddard, Arthur Michael, B.Sc., Research Physicist, British Celanese Ltd., Spondon.
Hanson, Edward Latham, M.A., Senior Science Master, Raynes Park County Grammar School, Surrey.
Hurley, Walter Edwin, M.A., B.Sc., Senior Science Master, Gillingham Grammar School, Dorset.
Jones, Ernest Beachcroft, B.Sc., Physics Master, Holywell Grammar School, Flintshire.
*Jones, Edgar William, B.Sc., Scientific Officer, Atomic Energy Research Establishment, Harwell.
*Keith, Harvey Douglas, B.Sc., Research Student, University of Bristol.
Le Poole, Jan Bart, Research Director, Electron Mier, Delft, Holland.
*Malcolm, Edward Donaldson, B.Sc., Research Physicist, D. Varney, Ltd.
Riley, Edgar, M.Sc., Senior Science Master, Ashby de la Zouch Boys' Grammar School.
Sen, Birendra Nath, M.A., B.Sc., Assistant Superintendent of Development (X-Ray), Government of India, Ministry of Defence, Kirkee.
Sowrey, Herbert Stanley, B.Sc., Head of Science Department, Glasgow Academy.
*Thumpston, Neil Stewart, B.Sc., Scientific Officer, Ministry of Supply, Armament Research Establishment, Shoeburyness.
Ware, Walter Frederick, B.Sc., Senior Physics Master, Cathays High School, Cardiff.
Williams-Leir, Gilbert Jekyll, B.Sc., Experimental Officer, Fire Research Organization, D.S.I.R.
Winstanley, James William, M.Sc., Physics Master, Manchester Grammar School.
*Worswick, Bernard Augustine, B.Sc., Technical Officer (Physical), Imperial Chemical Industries Ltd. (Dyestuffs Division), Manchester.
Young, John Crawford, B.Sc., Principal Teacher of Science, Grammar School, Paisley.

Graduates

An asterisk (*) indicates transfer from Student.

Ames, Gerald James, B.Sc., Electronic Engineer Physicist, de Havilland Engine Co., Edgware.
Blackburn, Robert, B.Sc., Lecturer in Physics, Constantine College, Middlesbrough.
Budge, Patricia Yvonne, B.Sc., Scientific Staff, Research Laboratories of the General Electric Co. Ltd., Wembley.
Brown, Henry Emanuel, B.Sc., Scientific Officer, Ionospheric Prediction Service, Commonwealth Observatory, Australia.
Cooper, Herbert, B.Sc., Assistant Physicist, Chance Bros. Ltd., Smethwick.
*Creamer, Ronald Herbert, B.Sc., Research Student, Birkbeck College, London.
*Dyer, Arthur James, M.Sc., Senior Demonstrator, Physics Department, University of Melbourne, Australia.
*Ferstat, Queenie, B.Sc., Technical Assistant, Department of Supply and Development's Aeronautical Research Laboratory, Australia.
Garland, Bryan Arthur, B.Sc., Lecturer in Physics and Mathematics, Glamorgan Technical College, Treforest.
Gill, David Anthony, B.A., Physics Department, British Paper and Board Industries Research Association.
*Green, Allan, B.Sc., Development Department, Fielden (Electronics) Ltd., Manchester.
*Green, Allan Peter, B.A., Scientific Officer, Solid Mechanics Section, British Iron and Steel Research Association, Sheffield.
Griffith, Stephen, B.Sc., Senior Physics Master, Pembroke Dock Grammar School, Pembrokeshire.
Grimsdell, John Leslie, B.A., Assistant Physics Master, Quintin School, The Polytechnic, Regent Street, London.
Hale, Magda, Cand. Real (Oslo), Spectrographer, Magnesium Elektron Ltd., Manchester.
*Halstead, Margaret Bessie, B.Sc., Assistant Physicist, Thorn Electrical Industries Ltd., London.
*Howard, Victor Charles, B.Sc., Research Physicist, Lace Research Association, Nottingham.
*Hudson, Stanley Bowes, B.Sc., Research Officer, Melbourne University, Australia.
Hutchinson, Edward Stanley, B.Sc., Senior Assistant, The Technical College, Widnes.
*Jones, Geoffrey Morgan David Bruce, B.Sc., Research Student, Manchester University.
*Lawson, Robert Wells, B.Sc., Scientific Officer, Post Office Research Station, London.
*Mason, Derek, B.Sc., Production Manager, Olympia Oil and Cake Mills, Selby, Yorks.
*Middlehurst, Jack, B.Sc., Research Assistant, Department of Physics, University of Sydney, Australia.
Mitchell, Sheena Mailer, B.Sc., Assistant, Physics Department, University College, Dundee.
Morris, Arnold Alec Rudolph Leslie Marshall, B.Sc., Royal Air Force, Technical Branch (Signals).
Munden, Dennis Lawrence, B.Sc., Chief Laboratory Assistant, Siemens Electric Lamps and Supplies Ltd., Preston.
Murray, Robert Walker, M.A., Research Physicist, Ferranti Ltd., Edinburgh.
Newcombe, Arthur Ronald, B.Sc., Scientific Officer, Ministry of Supply, London.
*Oliver, Philip Herbert, B.Sc., Physicist, Courtaulds Ltd.
Osborne, Basil Whitworth, B.Sc., Experimental Officer, Department of Scientific and Industrial Research.
*Parnell, Thomas Meredith, B.Sc., Demonstrator in Electrical Engineering, University of Melbourne, Australia.
Pomeroy, Patrick Reginald Dan, B.Sc., Bursar, British Non-Ferrous Metals Research Association, London.
*Privett, Roy Frank, B.Sc., Research Physicist, Research Laboratories of the General Electric Co. Ltd., Wembley.
Radoslovich, Edward William, B.Sc., Research Officer, Waite Institute, Adelaide, Australia.
Redies, Max Fred, M.Sc., Analyst, New South Wales Department of Agriculture, Australia.
Settle, Robert Nicholl, B.Sc., Research Officer, British Cotton Industry Research Association, Manchester.
*Strohfeldt, Max, B.Sc., Demonstrator, Physics Department, University of Queensland, Australia.

*Sullivan, Neil, B.Sc., Technical Assistant, Bristol Aeroplane Co. Ltd., Bristol.
*Toye, Trevor Cyril, B.Sc., Scientific Officer, British Iron and Steel Research Association, Swansea.
*Walker, George Sanderson, B.Sc., Technical Assistant, Ferranti Ltd., Edinburgh.
*Westwood, Neville Harry, M.Sc., Research Officer, University of Melbourne, Australia.
*Wright, Ian Francis, M.Sc., Research Student, Physics Department, University of Melbourne, Australia.
*Yates, David John Cabena, B.Sc., Research Physicist, Kodak Ltd., Harrow.

Subscribers

Chambers, H. H., Dorking.
Lund, L. G., Leeds.

Students

Adams, R. J., Harris Institute, Preston.
Bennett, A., University of Manchester.
Boulding, G. R., University College of South Wales and Monmouthshire, Cardiff.
Jennison, R. C., University of Manchester.
Kenyon, P. A., University of Manchester.
Reynolds, J. A., University College, Hull.
Shrewsbury, D. D., Royal Technical College, Salford.
Storrar, D. A., Chelsea Polytechnic, London.
Tootill, E. G. University of Manchester.

Deceased

Fellows—A. J. Bull, J. H. Gardiner, J. B. Henderson, J. M. G. Moneypenny, S. T. Peirce, H. Shaw, Professor G. W. Todd.
Associate—K. Freeman.
Subscribers—R. G. Manley, H. C. M. Stevens.

CORRECTION TO REGISTER

Bernhard, W., of Villejuif, France, elected as a Subscriber, was incorrectly reported in the February *Bulletin* as B. Wilhelm.

APPOINTMENTS VACANT

The inclusion of particulars of a vacancy must not be taken to imply that the Institute necessarily approves of the terms offered or that might be offered. Candidates should satisfy themselves that these are satisfactory, and they may always refer to the Institute for advice. A suggested form of contract under which a qualified physicist might reasonably be expected to serve is available on request.

The Royal Technical College, Glasgow. Department of Electrical Engineering. A vacancy exists for a Senior Lecturer in Electronics. Salary scale £1 150—£50—£1 450. The person appointed will be responsible to the Professor for courses in Electronics up to Honours Degree standard, and will be expected to undertake research, to participate in advanced lecture courses, and to supervise research students. Candidates must have good academic and/or industrial research experience, and should, preferably, hold a higher degree and have good experience in ultra-high-frequency technique. Particulars and application forms from the Secretary of the college.

The Royal Technical College, Glasgow. Department of Electrical Engineering. A vacancy exists for a Lecturer with particular interest and experience in Light-Current subjects. Salary scale £60 [illegible]—£1 150, with an efficiency bar at £850. Preference will be given to candidates with industrial experience. Research is expected. [illegible] facilities provided. Application forms from the Secretary [illegible] college.

Research Laboratories of The General Electric Co., Ltd., North Wembley, Middx., have vacancies for senior and junior physicists in the following fields: (*a*) microwave valves; (*b*) high-frequency heating; (*c*) microwave circuit design and measurements; (*d*) video frequency and special waveform generating circuits; (*e*) circuitry in connexion with high-frequency valves, including travelling wave tubes; (*f*) technical control work on X-ray tubes. Applications should be sent to the Personnel Officer, and should contain full details of age, qualifications and experience.

Young honours graduate physicist required in small research laboratory of old-established scientific instrument firm in the London area. The work covers a wide range of general physics and offers considerable scope for individual initiative. Reply to Box A.V.5, The Institute of Physics, 47 Belgrave Square, London, S.W.1.

Geophysicist with experience in resistivity surveying required for work in United Kingdom and abroad. Please write, giving details of qualifications and experience, to Box A.V.6, The Institute of Physics, 47 Belgrave Square, London, S.W.1.

Research Assistant.—Keen young physicist (20-25) required for research into high vacuum coating and associated techniques. Applicant should be up to Inter. B.Sc. standard with good laboratory experience, preferably but not essentially with vacuum physics or engineering. Progressive post with opportunities for continued study. Full details to W. Edwards & Co. (London) Ltd., Worsley Bridge Road, S.E.26.

Electronic Engineers or physicists required for progressive posts on interesting development work. Qualifications: degree or equivalent in physics or electrical engineering and 3 to 5 years or more experience of circuit design and/or electronic transducers is essential. Apply, stating age, full details of education and experience, to Personnel Department, ED/15, E.M.I. Engineering Development Ltd., Blyth Road, Hayes, Middlesex.

Physicist or Engineer required for investigation of special problems in the fields of mechanics and properties of matter, e.g. vibration problems associated with the design of mobile electronic equipment. The post is permanent and progressive. Qualifications: degree or equivalent plus at least five years' experience in similar type of work. Apply, stating age, full details of education and experience, to Personnel Department, ED/12, E.M.I. Engineering Development Ltd., Blyth Road, Hayes, Middlesex.

Vacancies exist for honours graduates in physics on the staff of the British Ceramic Research Association, for research work in connection with the pottery industry. The salary ranges are £375–£550 for Scientific Officers, and £550–£900 for Senior Scientific Officers, and the posts are pensionable under F.S.S.U. Applications, together with details of age, qualifications and experience, should be addressed to the Director, British Ceramic Research Association, Queens Road, Penkhull, Stoke-on-Trent.

The British Iron and Steel Research Association. The above Association is offering a bursary for post-graduate research on the formation, crystal structures, and properties of iron-carbon-nitrogen alloys. The bursary will be tenable at the Inorganic Chemistry Department, King's College, Newcastle-upon-Tyne, in the University of Durham (Head of Department: Dr. P. L. Robinson), and will be under the supervision of Dr. K. H. Jack. Applicants should have, or the expectation of, a good honours degree in metallurgy, physics or chemistry. The value of the bursary is £250 per annum, plus fees. Period of tenure will be normally for two years, commencing October 1950, but may be extended as necessary to complete the research, which is intended to lead to a higher degree. Written applications only to the Personnel Office, B.I.S.R.A., 11 Park Lane, W.1.

A Physicist or Physical Chemist with good University qualification and with at least two years' post graduate research experience is required for the Physical Chemistry Section of the Research and Development Division, Glaxo Laboratories Ltd. A candidate under 30 years of age with special experience in either Colloid Chemistry or Spectroscopy would be preferred. Salary according to qualifications and experience. Staff Superannuation Scheme. Write, stating full particulars which will be treated in strict confidence, to Personnel Director, Glaxo Laboratories Ltd., Greenford, Middlesex.

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